



## **Socio-Personal and Communication Characteristics Influencing Adoption of Recommended Banana Production Technology**

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### **ABSTRACT**

*One of the recent significant developments has been that horticulture has moved from the rural confines to commercial production and this changing scenario has given a boost to the horticulture industry. India has a large variety of fruits in its basket and accounts for 11.8 per cent of world's total fruit production. In India, banana is well adopted in the regions varying from humid tropical to humid subtropical and semi-arid subtropics. Banana constitutes an important component of the diet of rural and working class people and is an important source of high calorific energy. A study was organized in ten randomly selected villages (with maximum banana growers) of two purposively selected blocks of Durg district. Fifteen randomly chosen banana growers from each selected village were personally interviewed with the help of interview schedule to collect the primary data. The results of the study revealed that majority of the respondents were middle aged (36 to 55 years), 38 per cent of them were educated up to higher secondary school, more than half of them had medium sized family with 6 to 10 members each and just above two third of the respondents were either member of a rural social organization or an office bearer indicating reasonably significant social participation. So far as communication characteristics are concerned, two third of the respondents had medium overall use of information sources and majority of them had medium overall contact with extension personnel. As regards, adoption the study revealed that majority of the respondents had medium overall extent of adoption regarding recommended banana production technology. Education, social participation, sources of information and contact with extension agencies had positive and significant relationship with adoption of recommended banana production technology. Thus, it may be concluded that if the banana growers are more educated, have higher level of social participation make more use of information sources and have more contact with extension agencies, then their adoption level of recommended banana production technology will also be more.*

*Keywords: Socio-personal, Banana Production Technology*

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### **INTRODUCTION**

Banana is continuously exhibiting a spectacular growth worldwide. India alone produces 27.01 million tons from an area of 0.765 million ha [9]. India is the largest producer of banana in the world and also in Asia, and contributes 22.15 percent to global production from 7.4 % area [10] followed by China and Philippines. The country ranks only fourth in terms of production. Interestingly, there has been an appreciable increase in productivity of banana between 2001 and 2009 in India, owing to technological interventions. Increase in production is more significant in India due the technological interventions and adoption. India is contributing 48% of the total production in Asia from 37% of total area [9].

Banana is interlinked with Indian culture by playing an essential role in human welfare. Banana as a dessert fruit is easy to digest, fat free, rich source of carbohydrates. It contains various vitamins and has therapeutic values for the treatment of many diseases. It constitutes an important component of the diet of rural and working class people, as the fourth important global commodity in terms of gross value of producer after rice, wheat and maize/milk products and an important source of high calorific energy. It is not only a rich source of easily digestible carbohydrate but also provides essential vitamin B, C and several minerals such as potassium, calcium and magnesium and several medicinal properties. During the last decade, India remained as the largest producer of bananas in the world. Increase in production is partly due to enhanced area under cultivation and largely due to increased productivity by adoption of

high yielding varieties, quality planting material, integrated nutrient and water management, high density planting and ratooning and integrated pests and disease management. Due to wider adaptability, banana is cultivated from humid tropics to subtropics, arid subtropics, and from sea level up to an elevation of 1500 m. Availability of wider genetic variability, varying production systems, positive response to Good Agricultural Practices have attributed for wider adoption of banana in the country. Also, high productivity, year round demand and higher net returns have attracted many farmers to shift to banana cultivation in the country. Thus, banana has transformed itself from the status of backyard crop to commercial crop across the country.

The innovative fruit growers of Chhattisgarh are taking keen interest in advanced farming of banana. Many of them are growing tissue cultured Banana. According to the researchers engaged in development and promotion of tissue cultured banana, this improved version is a boon for the poor farmers. Durg District occupies the southwestern part of the Chhattisgarh plain and possesses belts of hilly country in the south, southwest and northwest, bestowed with mineral resources and forests. Agriculture occupies a vital place in the economy of Durg district. It provides direct and indirect employment to around 62 per cent of the total work force of the district. The total cultivable area of this district is 8.12 lakh ha, which accounts for 64 per cent of the total geographical area of the district.

Banana has multipurpose uses like health benefits, medicinal uses, textiles, paper etc. A banana really is a natural remedy for many ills. Banana plant is used as a source of fibre for high quality textiles. Banana fibre is also used in production of banana paper, which is useful for artistic purpose etc. In case of banana sap, it is extremely sticky and can be used as a practical adhesive. Sap can be obtained from the pseudostem, from the peelings, or from the flesh. Therefore, National Horticulture Mission works for dissemination of Banana production technology in Durg district of Chhattisgarh state, especially in Dhamdha, Berla, Patan and Durg block. As per information given by Horticulture department on National Horticulture Mission 858 ha. area is targeted for banana planting. (www.bhaskar.com 2009). Under this scheme, 150 ha. area of banana planting has already been covered in Saja, Dhamdha, Durg and Patan block of Durg district. This scheme is running progressively in Durg district. However, majority of banana growers are using their traditional ways of farming practices due to which there is still reduced production of banana in Durg District of Chhattisgarh.

On the basis of above factors the researcher was motivated to assess the socio-personal and Communication characteristics influencing adoption of recommended banana production technology, with the following specific objectives:

1. To study the socio-personal and communicational characteristics of banana growers.
2. To find out the relationship between socio-personal and communication characteristics of banana growers and adoption of recommended banana technology.

## METHODOLOGY

The study was carried out 2 selected blocks (*i.e.* Dhamdha and Berla) of Durg district. From each block, 75 banana growers were selected making a total of 150 respondents. The Primary data were collected by personally interviewing each respondent with the help of structured interview schedule. Collected data were analyzed by using appropriate statistical methods *viz.*, mean, per cent, S.D., correlation and multiple regressions etc.

## RESULTS AND DISCUSSION

Age, education, size of family and social participation were considered as socio-personal characteristics of the respondents. These characteristics were analyzed and are presented in Table 1.

**Table 1: Distribution of respondents according to their age characteristics**

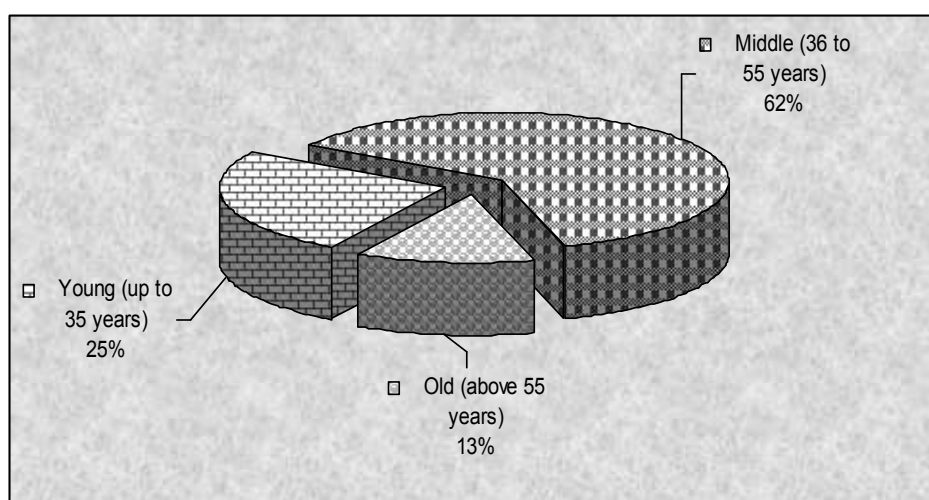
Age Category	Frequency	Per cent
Young (up to 35 years)	38	25.33
Middle (36 to 55 years)	93	62.00
Old (above 55 years)	19	12.67

It is observed from the Table 1 that the majority of the respondents (62.00%) belonged to middle age group (36 to 55 years), about 25.33 per cent respondents were of young age group (upto 35 years) and 12.67 per cent respondents were of old age group (more than 55 years), Thus, it may be concluded that the majority of banana growers belonged to middle age group (36 to 55 years) (Graph 1).

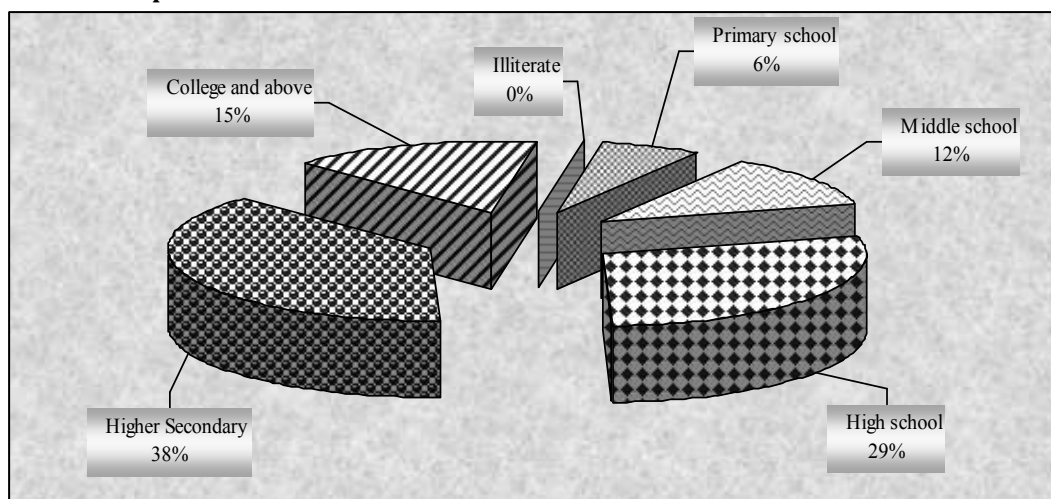
The findings are in accordance with the observations of Kazan and Agunga [6] who also found that the innovative farmers had an average age of 48 years and belonged to middle age group and Kavaskar [5]

indicated that age showed a positive and significant association with adoption of banana growers, while in this study age was found to have non significant relationship with adoption.

Education builds the ability of an individual to seek knowledge, understand and utilize things better and hence assessment of respondents' educational attainment was essential. The data presented in Graph 2 reveals maximum percent (38.00) of the respondents were educated upto higher secondary level and 28.67 per cent were educated upto high school level, followed by 15.33 per cent of the respondents who were educated upto college and above level. Whereas, 12.00 per cent respondents had education upto middle school level and only 06.00 per cent of the respondents had education upto primary school level. None of the respondents were found in the category of illiterate. Thus, it can be inferred that all the banana growers were found to be educated and 38.00 per cent of them had above high school education. However the findings vary with the observations made by Patil, [13] who reported that maximum percent of banana growers (36.67 %) were educated upto middle school, 25 per cent of respondents had taken education upto high school, while only 5.83 per cent of the respondents were illiterate.



**Graph 1: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR AGE**



**Graph 2: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EDUCATION**

Education found positively and significantly correlated with adoption at 0.01 per cent level of significance. Multiple regression analysis reveals that out of the thirteen variables under study, only three variables namely; education, annual income and knowledge had positive and significant contribution towards adoption at 0.01 per cent level of significance. Nikhade and Potdar [11] also stated that education of banana growers was found to be significantly associated with adoption of banana production technology.

**Table 2: Distribution of respondents according to their Family size**

Family size	Frequency	Per cent
Small (up to 5 members)	54	36.00
Medium (6 to 10 members)	78	52.00
Big (> 10 members)	18	12.00

Table 2 indicated that Majority (52.00%) of the respondents had medium size of family (6 to 10 members) followed by 36.00 per cent with small size of family (upto 5 members). Rest of the respondents (12.00%) belonged to large size of family (more than 10 members). This indicates that the maximum number of the respondents belonged to medium size of family. Correlation analysis showed that Size of family had non significant contribution towards adoption. The findings are in line with Farooq [1] who also noticed that majority of banana growers (94.40%) were having 6 and above members in their family followed by 5.60 per cent respondents who had up to 5 members in their family.

**Table 3: Distribution of respondents according to their Social Participation**

Social participation	Frequency	Percent
No membership	49	32.67
Membership in one organization	73	48.66
Membership in two and more than two organization	22	14.67
Executive / office bearer	6	04.00

Social participation gives an idea about the respondent's participation in social activities. Table 3 showed that maximum number of respondents (48.66%) had membership of one organization followed by 14.67 per cent of respondents had membership in two and more than two organizations and only 04.00 per cent respondent, were found to be in office bearer's category. However, 32.67 per cent of the respondents were having no membership in any organization. Naiknavare [8] also observed that 10.00 per cent of banana growers possessed high social participation 23.33 per cent had medium and only 4.67 per cent respondents had low social participation level respectively.

It was also found that Social participation had significant and positive contribution towards adoption. Patil and Waghdbare [12] and Kavaskar [5] also investigated that socio-politico participation, extension participation characteristics of banana growers were found to be significantly associated with the adoption of banana cultivation technology.

**Table 4: Distribution of respondents according to overall use of Sources of information**

S.N	Sources of information	Frequency	Per cent
1.	Low (upto 3 score)	36	24.00
2.	Medium (4 -6 score)	99	66.00
3.	High (above 6 score)	15	10.00
	Total	150	100.00

The findings of table 4 indicate that majority (66.00%) of the respondents utilized medium level of Information Sources, followed by 24.00 per cent of the respondents who utilized Low level of information sources, while only 10.00 per cent of the respondents had utilized high level of information sources. The findings contrast with observation of Marimuthu and Rathkrishnan [7] who stated that majority (53.34 %) of the banana growers belonged to low level information sources utilization, followed by an equal percentage (23.33 %) under medium level and high level of information source utilization.

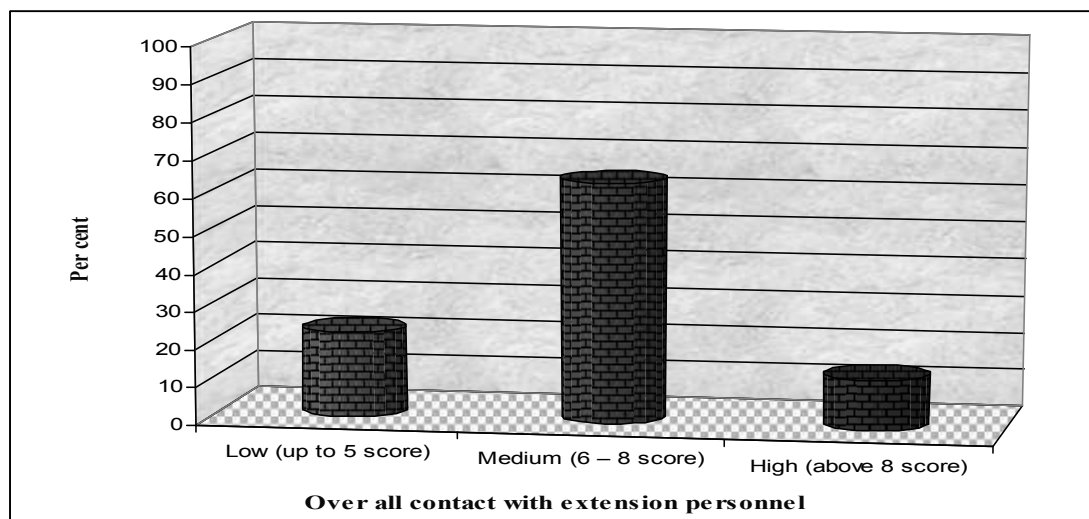
The use of information sources was also assessed on the basis of individual information sources utilized by respondents and found that 88.00 per cent of respondents were receiving the agricultural information related to banana production technology from others i.e. friends, neighbours, relatives, village leaders etc. followed by Progressive farmers (82.00%), Agricultural magazine (62.00%), T.V. (57.33%), Newspaper (32.00%), Leaflets (25.33%), Kisanmela (24.67%), Training/visit (18.67%), Demonstration (12.00%), Radio (10.00%), Agricultural letter (6.67%) respectively and it was found that source of information had significant and positive contribution towards adoption of banana production technology.

**Table 5 : Distribution of respondents according to over all contact with extension personnel**

S.N.	Contact with extension personnel	Frequency	Per cent
1.	Low (up to 5 score)	34	22.67
2.	Medium (6 - 8 score)	96	64.00
3.	High (above 8 score)	20	13.33
	Total	150	100.00

The result of Table 5 indicates that majority (64.67%) of the respondents had medium level of extension contact, followed by 22.67 per cent respondents who had low level of extension contact while only 13.33 per cent respondents had high level of extension contact. (Graph 3). From the above findings, it may be concluded that only 13.33 per cent respondents had high level of extension contact and contact with

extension personnel had significant and positive contribution towards adoption. The findings are in accordance with observation of Farooq [1] found that majority of banana growers (62.40%) had medium extension contact followed by 20.80 per cent and 16.80 per cent respondents were observed in high and low extension contact, respectively and Kavaskar [5] indicated that extension agency contact showed a positive and significant association with adoption of banana growers.



**Graph 3: DISTRIBUTION OF RESPONDENTS ACCORDING TO OVERALL CONTACT WITH EXTENSION PERSONNEL**

**Table 6: Distribution of respondents according to their extent of contact with extension personnel**  
n=150

S.N.	Extension personnel	Extent of contact		
		No contact (f) (%)	2-3 times in a year (f) (%)	Monthly (f) (%)
1.	Rural Horticulture Extension Officer	06 (04.00)	24 (16.00)	120 (80.00)
2.	Horticulture Development Officer	54 (36.00)	28 (18.67)	68 (45.33)
3.	Subject Matter Specialist	64 (42.67)	52 (34.67)	34 (22.66)
4.	Agriculture Scientist	118 (78.67)	32 (21.33)	00 (00.00)
5.	Others	121 (80.67)	17 (11.33)	12 (08.00)

(f)-Frequency, (%) - per cent

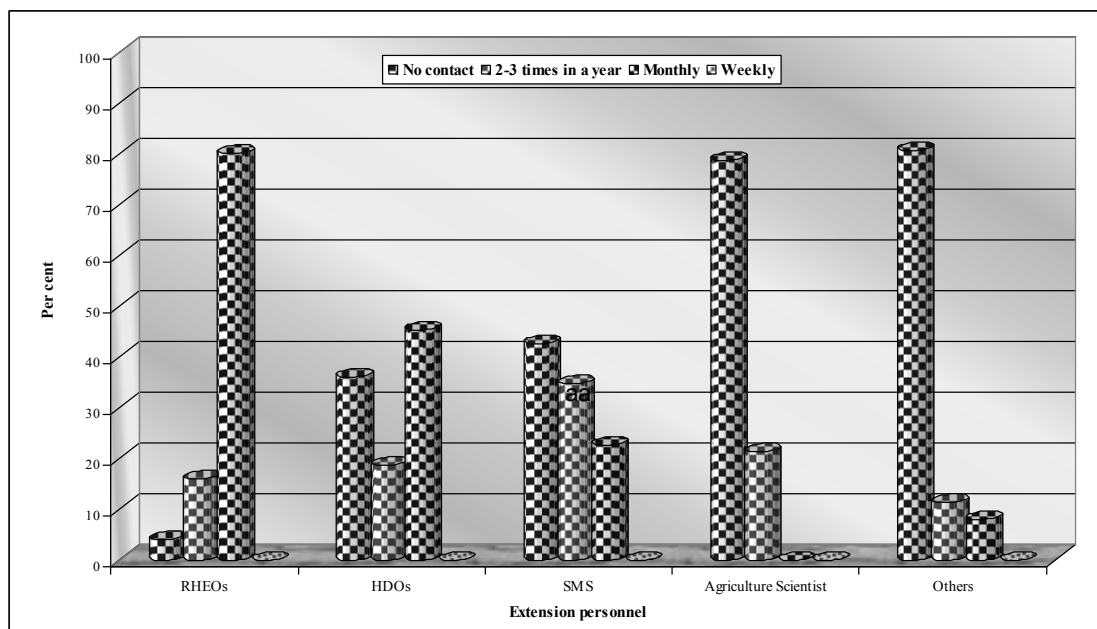
The results of Table 6 indicate that majority of the respondents (80.67%) never consulted with others *i.e.* Marketing Officer, Senior agriculture development officer etc. for obtaining the needed information about the recommended banana production Technology, where as 78.67 per cent respondents had no contact with Agricultural scientists and 42.67 per cent respondents had no contact with Subject Matter Specialists and 36.00 and 04.00 per cent of the respondents reported that they had no contact with HDOs and RHEOs respectively for obtaining information about recommended banana production technology. (Graph 4).

Majority of the respondents (34.67%) consulted Subject Matter Specialist 2-3 times in a year for obtaining the needed information about recommended banana production technology. Whereas 21.33 per cent respondents consulted Agricultural Scientists 2-3 times in a year and 18.67 per cent, 16.00 per cent and 11.33 per cent of the respondents had contact with Horticulture Development Officer, Rural Horticulture Extension Officer and others respectively once in a year to know about recommended banana production technology. 80.00 per cent respondents had consulted RHEOs once in a month to know about the new production technology of banana and related information, while 45.33 per cent of the respondents obtained valuable suggestions from Horticulture Development Officer once in a month. Whereas, 22.67 per cent respondents consulted Subject matter specialist, 08.00 per cent of the

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respondents consulted with others once in a month to gain awareness regarding recommended banana production technology, and none of the respondents made contact with agricultural scientists.

It can be concluded that RHEOs, i.e. Gram sevaks and Horticulture development officer were the most frequent visiting extension personnel in the village from whom the respondents obtained latest information regarding recommended banana production technology.



**Graph 4: DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR EXTENT OF CONTACT WITH EXTENSION PERSONNEL**

## CONCLUSION

It was found that majority of the respondents were middle aged, educated up to higher secondary level, had medium family size therefore, there is an urgent need to improve education and knowledge level through providing education and training, skill, demonstrations, fieldtrips and proper technical guidance to farmers. The skill demonstrations on use of various practices of banana crop may therefore be helpful in increasing the adoption of recommended banana production technology. The findings pertaining to social participation revealed that around one third of the banana growers had no membership in any organization indicating no social participation on their part. The extension workers can motivate these banana growers to involve themselves in group activities like becoming active members of youth clubs, cooperative societies, and cultural organizations etc. which would enhance their social participation and thereby have a direct impact on adoption of recommended banana production technology. Education, social participation, sources of information and contact with extension agencies had positive and significant relationship with adoption of recommended banana production technology. Thus it may be concluded that if the banana growers are more educated, have higher level of social participation, more use of information sources and more contact with extension agencies then their adoption level of recommended banana production technology will also be more.

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